







## RAPID MANUFACTURING OF PRODUCTION GRADE PARTS







### rapidshape 3D PRINTERS

#### i30+

#### The Powerhouse thanks to Automation

The powerful i30+ has been setting new standards in quality and productivity for some time. Thanks to the integrated, patented Automatic Separation unit, your printed parts are automatically separated from the build platform after the printing process is finished and collected in a collection basket. The next print job is started immediately, without manual intervention. Fast and half-automated.



Your Features Open system

Resin temperature control Integrated Force Feedback Material identification (RFID) Certified auto calibration (ACCS)

Remote Access available

Direct Access to Rapid Shape Knowledge Center

Your Benefits Faster print speed

User friendliness

Automatic Separation Module (ASM)

#### Performance Parameters

	i30+
	130*
Building area	133 x 75 mm
Native pixel	+/- 34 μm
Max. part height	110 mm (with ASM 70 mm)
Light source	385 nm UV LED
Resolution	HD 1920 x 1080 px
Dimension (W $\times$ H $\times$ D)	480 x 690 x 410 mm
Connections	WLAN, TCP/IP, USB
Control	10" touch-screen

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### rapidshape 3D PRINTERS

#### i50+

#### The Workhorse for the professional Application

The i50+ is our new workhorse for printing any indication. With a print range three times (!) larger than the i30+ and the optional, patented separation unit, you can catapult the number of pieces per day many times over. Your printed parts are automatically separated from the build platform after printing is finished and collected in a big collection basket. The next print job is then started immediately, without manual intervention. An Automated Refill unit ensures that there is always a sufficient level of printing material in the reservoir.

The i50+ is an automated 3D printer that is user friendly, productive, and highly automated – once in-stalled, jobs can be loaded to a queue where they are automatically printed, one after another, as long as the resin does not change.

Your Features Automatic Separation Module (ASM)

Automatic Resin Refill unit

Open system

Resin temperature control

Automatic door opener

Material identification (RFID) Certified auto calibration (ACCS) Integrated Force Feedback

Remote Access available

Connectivity to RS wash and RS cure

Personal support

Direct Access to Rapid Shape

**Knowledge Center** 

Your Benefits

High safety standards

Quality

Productivity

Material and time savings

Continuous production

Fast resolution of issues

Better print quality (4K Projector)



#### Performance Parameters

	i50+
Building area	231 × 130 mm
Native pixel	+/- 30 μm
Max. part height	300 mm (with ASM: 100 mm)
Light source	385 nm LED
Resolution	4K 3840 × 2160 px
Dimension (W $\times$ H $\times$ D)	600 × 1660 × 570 mm
Connections	WLAN, Ethernet, USB
Control	10" LCD-Display, touch-screen

### rapidshape 3D PRINTERS

#### i100+

#### **Industrial Production at the next Level**

The i100+ meets the requirements with a wide pressure range. Long-lasting reproducible quality make it a 24/7 production unit with industrial projection system and internal cooling for system components. As a stand-alone solution or in conjunction with a production line, it delivers perfect results. For true in-sequence production without breaks and unnecessary downtime.

Your Benefits

High safety standards

Quality

Productivity

Continuous production

Fast resolution of issues

Better print quality (4K Projector)

Material and time savings

Your Features Automatic Separation Module (ASM)

Automatic Resin Refill unit

AC controlled interior for

continuous use

Resin temperature control

Automatic door opener

Material identification (RFID)

Certified auto calibration (ACCS)

Integrated Force Feedback

Remote Access available

Connectivity to RS wash and RS cure

Direct Access to Rapid Shape

**Knowledge Center** 

Personal support

**Your Benefits** 

Safety

Quality

Productivity

Material and time savings

Continious production

Fast resolution of issues

#### Performance Parameters

	i100+
Building area	338 x 190 mm
Native pixel	+/- 44 μm
Max. part height	80 mm
Light source	405 nm, ultra high power UV LED
Resolution	4K 3840 x 2160 XPR
Dimension (W $\times$ H $\times$ D)	625 x 1593 x 443 mm
Connections	TCP/IP, USB
Control	10" touch-screen
Versions	Cabinet / Inline (Specifications in request)



#### High Performance Photopolymers from LOCTITE®

LOCTITE® 3D Printing offers a wide range of high-performance engineering resins specifically designed for industrial applications. This enables OEM Printer Partners, Service Bureaus and Resellers to overcome some of the most severe limitations in the 3D Printing market and produce truly functional parts. LOCTITE® engineering resins are designed to operate in a broad range of DLP and SLA platforms from prototyping to large scale production in order to meet your specific application requirements. Customers can now produce final parts for their specific needs in Aerospace, Automotive & Transportation, Industrial & Manufacturing, Medical and Consumer Goods.

Every application has its own needs, and we are here to support your journey towards additive manufacturing at industrial scale. LOCTITE offers you a broad material portfolio of general purpose, high impact, high temperature resistant and elastomeric resins for a broad range of leading DLP systems. We work with industry leaders and equipment manufacturers to ensure our materials are validated within a qualified industrial workflow. LOCTITE materials allow you to produce functional, repeatable and reliable parts.

# LOCTITE 3D 3843 HDT60 High Toughness LOCTITE 3D 3860 HDT180 High Heat LOCTITE 3D 3172 HDT50 High Impact LOCTITE 3D 3172 HDT50 High Impact Validated by LOCTITE Validated by LOCTITE

Available in Black

A high-strength engineering plastic with good impact resistance and excellent surface finish. Attributes are similar to ABS. Applicable for tooling, low temperature molding, anatomical models as well as consumer applications such as insoles.

- Moderate heat deflection temperature, HDT 60°C
- · Tough with outstanding surface finish
- Superior strength and impact resistant
- Basic Biocompatibility achievable
   ISO 10993 -5/-23 passed

Rigid resin that withstands high temperature stress at 220°C (at 0.455 MPa). Ideal for functional prototyping and high temperature applications where high resolution and high HDT is required.

Available in Black

#### BENEFITS:

- No deformation, more durable & survives longer vs. other tooling resins in the market
- Easy to print with high print resolution

Available in Gray

Resin that allows to produce functional parts that require high stiffness with a good surface finish and high impact resistance. Attributes are similar to Polypropylene (PP). This material is resistant to impact stress and is ideal for tooling applications, manufacturing aids, housings, and consumer applications such as insoles.

#### BENEFITS:

- Tough & Durable
- · Superior impact strength
- Nice surface finish
- Basic Biocompatibility achievable ISO 10993 -5/-23 passed



Rigid resin designed for tooling and molding applications, due to its high stiffness and high temperature resistance withstanding up to 230°C

#### BENEFITS:

**BENEFITS:** 

- · Good dimensional stability
- · Good surface finish

A high temperature resistance material that allows the production of parts with high surface quality and outstanding dimensional accuracy.

#### RENEFITS

- High heat deflection temperature, HDT 80 °C
- Tough with good dimensional stability
- · Good surface finish

Tough resin designed for interior applications in Automotive, due to its high surface quality, dimensional accuracy and temperature resistance.

#### **BENEFITS**

- High heat deflection temperature, HDT >100 °C
- · Tough and durable
- · Good surface finish
- Basic biocompatibility is achievable ISO 10993 -5/-23 passed

# LOCTITE 3D 3818 HIGH ACCURACY LOCTITE 3D IND4D2 A7D High Rebound LOCTITE 3D MED413 LOCTITE 3D MED413 LOCTITE 3D MED413 Validated by LOCTITE Validated by LOCTITE Validated by LOCTITE

A fast printing, rigid photopolymer, that can be printed with high-resolution features.

Single component elastomer material with high elongation and high resilience, excellent tensile stress and high energy return while also not requiring thermal post processing

A high-performance, high modulus material with excellent flexural and tensile physical properties. Stiffness combined with toughness make this material ideal for use in a wide variety impact resistant medical devices

#### **BENEFITS:**

- · Exceptional surface finish
- · Fast printing
- Accurate
- · Dimensional stability during post curing

#### **BENEFITS:**

- True elastomeric behavior, with good rebound performance
- · Excellent interlayer adhesion
- Exceptional durability to compression forces
- · Color matching capabilities
- Safe to touch (ISO 10993 23 passed)

#### **BENEFITS:**

- Parts can function at body temperature
- Outstanding surface finish
- · Excellent machineability
- Capable of meeting ISO 10993-5 & -10 standards for biocompatibility

# LOCTITE 3D IND405 HDT50 HIGH ELONGATION IND475 A60 HIGH REBOUND Walidated by LOCTITE Validated by LOCTITE

Available in Black, Clear

Rigid, high elongation and high toughness one-part material with excellent surface finish properties. Properties are comparable to an unfilled thermoplastic like Polypropylene (PP)

Single component industrial strength UV resin that cures to a soft, elastomeric material with a good balance of hardness, strength and elongation.

#### **BENEFITS:**

- High impact resistance with high elongation
- Easy to print (one-part material)
- Tough and Durable
- The toughest clear resin (only applicable for clear material)
- For Clear color version, basic biocompatibility is achievable (ISO 10993 -5/-23 passed)

#### BENEFITS:

- True elastomeric behavior
- Fast Printing with low shrinkage behavior
- High resilience / High energy return
- Safe to touch (ISO 10993 23 passed)

For further information please see TDS on www.LoctiteAM.com or reach out to Loctite3dp@henkel.com.



For materials validated by LOCTITE, visit Printer Validation page on LoctiteAM https://www.loctiteam.com/printer-validation-settings/ and detailed workflows on https://www.loctiteam.com/printer-settings/

#### **ABOUT**

#### **LOCTITE**®

LOCTITE Additive Manufacturing delivers unique photopolymers with production capability, customize resins and deliver engineering services to identify the best application to address your needs. With a constantly growing portfolio of high-performance materials, specialized equipment and post-processing solutions, LOCTITE overcomes the limitations of conventional 3D printing to enable additive manufacturing for the production of durable, functional parts. Through its strategic partnership with technology leaders for specialized equipment, LOCTITE is driving the adoption of 3D printing beyond prototyping and toward the production of final parts.

(www.LoctiteAM.com)

#### **RAPIDSHAPE**

Rapid Shape® is a south Germany technology company in the field of generative rapid prototyping and rapid manufacturing systems. Founded by Andreas Schultheiss – being as well shareholder of Schultheiss GmbH, well known specialist in heating and casting technologies – the company has a profound background.Rapid Shape® brings a new and patented generative technology to the market that is setting a new benchmark in speed and accuracy in the field of 3D manufacturing. Research and development of the new technology and corresponding resins started already several years back.

For more information and a list of Rapidshape resellers, please visit www.rapidshape.de



#### Henkel

#### Henkel AG & Co. KGaA

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#### Rapidshape

#### Rapid Shape GmbH

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#### **Grupa MCC**

#### Grupa MCC sp. z o.o.

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